

ECE 109L - NODE ANALYSIS - LAB 14

NODE VOLTAGES

FALL 2006

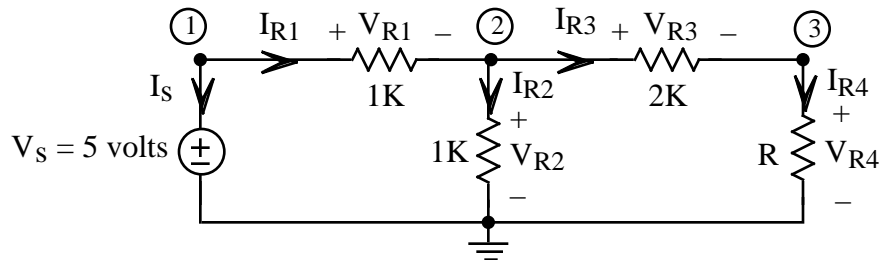
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OBJECTIVE

The objective of this lab is to measure node voltages and then use them to calculate the voltages across and currents through the circuit elements

LAB

1. Given the following circuit



PARTNER 1: $R = 1K$ PARTNER 2: $R = 2K$

- Measure your resistor values. Compare with nominal values
- Measure the node voltages V_1 , V_2 and V_3
- Make use of your measured node voltages to calculate all the resistor voltages
- Measure the voltages across the resistors
- Compare your calculated and measured resistor voltages
- Make use of Ohm's Law and your measured voltages to calculate all the resistor currents and then make use of KCL to calculate the current I_S through the voltage source
- Measure all the currents you calculated in part (f)
- Compare your calculated and measured currents